REMARKS

This is in full and timely response to the non-final Office Action dated October 5, 2005. The present Amendment amends claims 9 and cancels claims 1-8 and 10-14 in order to further clarify a portion of the scope sought to be patented, and otherwise disputes certain findings of fact made in connection with the rejection of the claims. New claims 15 and 16 have also been added to depend from independent claim 9. Support for these amendments can be found variously throughout the specification, including, for example, original claim 9, page 7, lines 3-22, and page 15, lines 8-19. No new matter has been added. Accordingly, claims 9, 15, and 16 are presently pending in the application, each of which is believed to be in condition for allowance. Reexamination and reconsideration in light of the present Amendment and the following remarks are respectfully requested.

Claim to Priority

Acknowledgement of the proper receipt of the certified formal papers filed in connection with Applicant's claim to priority under 35 U.S.C. § 119(a)-(d) is noted with appreciation.

Information Disclosure Statement

It is also noted with appreciation that the Information Disclosure Statement filed on April 8, 2004 has been considered by the Examiner.

New Claims

Support for new claims 4-8 can be found variously throughout the specification, including, for example, page 6, line 25 to page 8, line 16. Since each of these new claims is clearly distinguishable from the applied art of record, allowance of the same is courteously solicited.

Claim Rejections- 35 U.S.C. § 102

In the Action, claims 1 and 4 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 4,880,986 to Yamada et al. ("Yamada").

Claims 1 and 4 are canceled without prejudice or disclaimer as to their underlying subject matter. Withdrawal of this rejection is respectfully requested

Claim Rejections- 35 U.S.C. § 103

In the Action, claims 1-14 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,572,606 to Kliewer et al. ("Kliewer") in view of Yamada. This rejection is respectfully traversed.

Claims 1-8, and 10-14

Claims 1-8, and 10-14 are canceled in this amendment without prejudice or disclaimer as to their underlying subject matter. Withdrawal of the rejection of these claims is respectfully requested.

Claim 9

According to Federal Circuit precedent, the burden of establishing a *prima facie* case of obviousness under 35 U.S.C. § 103 rests squarely on the shoulders of the Examiner. *In re Rinehart*, 531 F.2d 1048, 1052 (C.C.P.A. 1976); *accord.* MPEP 2142. To establish a *prima facie* case of obviousness, three basic criteria must be met.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *See, e.g., Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985) ("To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references"); *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987) ("When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references"; *ACS Hosp. Sys. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984) ("Obviousness cannot be established by combining

the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination"); *accord.* MPEP 2143.

Second, there must be a reasonable expectation that the proposed modifications or combination would be successful. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097, 231 USPQ 375 (Fed. Cir. 1986); *accord.* MPEP 2143.02.

Third, the prior art reference (or references when combined) must teach or suggest each and every claim limitation. *See, e.g., In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); *accord.* MPEP 2143.03.

With respect to the third element of a *prima facie* case of obviousness, claim 9 discloses, *inter alia*, an apparatus for ablating a cornea by irradiation of an ultraviolet laser beam, which comprises a **fluorescent glass for calibration,** a fluorescence detecting optical system for **obtaining intensity distribution of the fluorescence** emitted from the fluorescent glass, and a **calibration means** for calibrating at least one of the corneal ablation data and the corneal ablation control data **based on the intensity distribution** obtain by the fluorescence detecting optical system.

Kliewer et al. does not at all disclose, teach, or even suggest a calibration means for calibrating at least one of the corneal ablation data and the corneal ablation control data based on the **intensity distribution** obtained by a fluorescence detecting optical system.

As recited in claim 9, calibration of the corneal ablation data and/ or the corneal ablation control data involves aiming the irradiated laser beam at the fluorescent glass. Note that during the calibration process, the laser beam for ablating the cornea is irradiated onto the **fluorescent glass**.

In the calibration mode, the irradiation means is controlled to ablate a predetermined ablation area at a constant ablation depth. However, instead of ablating a cornea during the calibration procedure, the irradiation beam strikes the fluorescent glass. When the laser beam strikes the fluorescent glass, the glass produces a fluorescence intensity.

By changing the direction of the laser beam in reference to the fluorescent glass, the intensity distribution of the fluorescence is obtained.

The calibration means uses the fluorescence intensity distribution to calibrate the corneal ablation data and/ or the corneal ablation control data for ablating a cornea of patient's eye.

The fluorescent glass and the calibration means, provided as part of the ablation apparatus, allow for the device to respond to changes in the intensity distribution of the irradiation laser caused by changes in the optical system and even in the laser source itself.

On the other hand, the apparatus disclosed by Kliewer merely adjusts the **spot area**, on a pulse by pulse basis, or within a single ablation pattern, (see column 7, lines 37-39) based on angle data (provided from a topography of the eye) and an optical detector as a feedback mechanism (to measure the spot area) (column 7, lines 8-22).

Kliewer does not at all disclose, teach, or even suggest the determination of the irradiation intensity of an irradiated laser based on fluorescence intensity. Kliewer merely discloses that an optical detector could monitor the fluorescence of the cornea, which then enables "determination of **spot area**, and thus fluence (given a fixed **laser beam power**)" (*see* column 7, lines 8-19, emphasis added). Therefore, the optical detector is merely a feedback mechanism, measuring a spot area concurrent with or following the ablation of the cornea. Thus, Kliewer provides no means for determining the irradiation intensity of the laser itself based on a fluorescence intensity, but rather Kliewer only allows for determination of a laser fluence based the angle of the laser beam in relation to the cornea (*see* column 7, lines 27-31) and the presumed power of the laser beam, using an optical detector as a feedback mechanism, to determine a spot area and calculate laser fluence, concurrent with or following the ablation of the cornea (*see* column 7, lines 11-13).

Additionally, Kliewer does not even suggest the determination of an irradiation intensity **distribution** of an irradiated laser.

Kliewer also does not even suggest that a fluorescent glass might be used to obtain a fluorescence intensity and/ or a fluorescence intensity distribution.

Further, Kliewer does not even indicate the use of a calibration means for calibrating corneal ablation data and/ or corneal ablation control data based an obtained fluorescence intensity distribution. Rather, Kliewer merely allows for variation of a laser beam on a pulse-by-pulse basis, or within a single ablation pattern, whereby the laser beam is adjusted by taking one

measurement, then ablating a specific area, then taking the next measurement, and ablating the next specific area, etc.

Yamada fails to compensate for any of the above deficiencies in Kliewer.

Accordingly, because Kliewer and Yamada, either alone or in combination, fail to disclose, teach or suggest each and every limitation of claim 9, a *prima facie* case of obviousness has not been established, and withdrawal of this rejection is respectfully requested. *See, e.g., In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); *accord.* MPEP 2143.03.

With respect to the first element of a *prima facie* case of obviousness, it is established law that one "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *Ecolochem, Inc. v. Southern Cal. Edison Co.*, 227 F.3d 1361, 1371, 56 USPQ2d 1065 (Fed. Cir. 2000) (citing *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1780, 1783 (Fed. Cir. 1988)). Indeed, "[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight." *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

The Office Action provides no motivation for why one skilled in the art of laser ablation would be motivated to combine a fluorescent glass, as disclosed by Yamada, with the laser system disclosed by Kliewer, to arrive at the apparatus as recited in claim 9 of the present application.

Yamada discloses fluorescent glass used in **dosimeters**.

Kliewer discloses a laser apparatus, but does not disclose calibration of the ablation apparatus by determination of an irradiation intensity distribution.

Therefore, there would be no motivation for one to use the fluorescent glass, as disclosed by Yamada for use in dosimeters, in the laser system disclosed by Kliewer, in order to perform the function of determining an irradiation intensity distribution. Withdrawal of this rejection is respectfully requested.

CONCLUSION

For at least the foregoing reasons, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the examiner is respectfully requested to pass this application to issue. If the examiner has any comments or suggestions that could place this application in even better form, the examiner is invited to telephone the undersigned attorney at the below-listed number.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. WEN-0020 from which the undersigned is authorized to draw.

Dated: April 4, 2006

Respectfully submitted,

By_____

Ronald P. Kananen
Registration No.: 24,104
RADER, FISHMAN & GRAUER PLLC
1233 20th Street, N.W.
Suite 501
Washington, DC 20036
(202) 955-3750
Attorney for Applicant